REMARKS/ARGUMENTS

REMARKS

In reply to the Office Action mailed April 4, 2006, Applicants respectfully traverse all of the Examiner's claim rejections under 35 USC 103.

Interview with Examiner Sain

Applicants would like to thank the Examiner for the courtesy extended during an interview with Applicants' attorney. During that interview, Applicants' invention as set forth particularly at each of claims 1 and 3 was discussed in relation to the Nazem et al. and Greenwood references, respectively. As understood, Applicants' pending claims, as last amended on May 24, 2005, are distinguished from these previously relied upon references. Applicants' attorney set forth clear distinctions between Applicants' invention as set forth at claim 1 and the teachings particularly of Nazem et al., and further set forth distinctions between Applicants' claim 3 and the teachings of Greenwood. Applicants' attorney described what is set forth below regarding these distinctions between Applicants' invention and the teachings particularly of Nazem et al. and Greenwood.

Claim Rejections Under 35 USC 103

I. **CLAIMS 1, 2, 16, 17, 30, 31, 33, 46, 47 AND 61-84 ARE REJECTED UNDER 35 USC 103(A) AS BEING UNPATENTABLE OVER AAPA IN VIEW OF LOWERY, IN FURTHER VIEW OF NAZEM ET AL. APPLICANTS RESPECTFULLY TRAVERSE THIS REJECTION.**

Claim 1 recites receiving a single request specifying multiple content components derived from content hosted by a plurality of distinct component servers, and after receiving the request, generating a plurality of requests for the content as parallel worker threads spawned from a main execution thread, and sending each of the plurality of requests to the component servers before receiving any response, thereby

permitting concurrent generation of the content components at the component servers. A personalized network page is assembled and transmitted. As understood, no combination of AAPA, Lowery nor Nazem et al. teaches or suggests this feature.

As the Examiner concedes that neither AAPA nor Lowery teach or suggest this feature, the following refers particularly to Nazem et al., and particularly to the illustration at Figure 2 and associated text descriptions at the abstract and at columns 2-4 in the specification of Nazem et al.

An advantage of Applicants' invention is that the requested data is retrieved from each of the component servers very soon ***after*** a request is received from a client, for example, client 518A of Applicants' Figure 5. The second element of Applicants' claim 1 recites specifically "***After receiving the single request***, generating a plurality of information requests for the content ...." This feature of Applicants' invention permits the assembly of a network page that has very fresh data.

Nazem et al., on the other hand, teach to assemble a page entirely at the page server from data that has been previously retrieved and stored at the shared memory 212. This requires that the data used must be retrieved from data sources 230, 232, 234 some time ***before*** a client request for the web page.

Nazem et al. even teach away from retrieving the data after receiving a request from a client both in the Background at column 1, lines 30-47, and at column 4, .lines 9-23. For example, beginning at column 3, line 65, Nazem et al. state that:

> Using user templates and a shared memory for the live data, page server 104 can quickly build custom pages in response to a user request. Where the user template is cached, ***the page can be generated entirely within the page server 104(*** *emphasis added).*

Beginning at line 10, Nazem et al. further state that:

> [t]he user will never be faced with a situation where they have to wait for a server to rebuild a page for them by querying the various data providing servers .... Page generator 210 can generate custom front page 218 much more quickly using shared memory 212 as compared with using servers 230, 232, 234 and page template 202. One reason for this is that the time it takes to retrieve data from shared memory 212 does not appreciably increase relative to the bandwidth delay time when more data is retrieved. For example, if stock server 232 were queried for each individual stock quote, a page with fifty stock quotes might take ten times as long to generate as a page with five stock quotes.

And at the Abstract, lines 14-17, Nazem et al. further state:

> With the live data stored in a local, shared memory, any custom page can be built within the page server, eliminating the need to make requests from other servers for portions of the live data.

Nazem et al. teach that it is better to retrieve the data before a client request, then to do so after a request come in, because this avoids untoward delays due to bandwidth constraints. Nazem et al. contemplate that retrieving the data after a request comes in for a personalized page would result in intolerable delays in a serial processing environment wherein the multiple content components are retrieved *consecutively*. Where Nazem et al. mention that "a page with fifty stock quotes might take ten times as long to generate as a page with ten stock quotes," they clearly suggest that the delay is equal to the sum of the retrieval processes for each individual content component.

Applicants' invention advantageously requires generation of multiple requests for multiple content components as ***parallel worker threads*** spawned from a main

execution thread, thereby permitting concurrent generation of the content components at the component servers. In this way, the data may be retrieved ***after*** the request comes in, thereby providing enhanced freshness, while the generation of multiple requests as parallel worker threads permitting concurrent generation of the content components does not result in a delay that is the sum of the time for each retrieval process. Instead, the delay will be only as long as the longest retrieval process for any of the requested components (note that Applicants' invention as set forth at claim 2 sets forth an upper limit on the wait time before generating the personalized page without a component that is delayed beyond a timeout period). The result is that Applicant's invention provides a personalized page with fresher data than Nazem et al., and without intolerable delay. As Nazem et al. neither teaches to retrieve the data from the component servers after a request for a personalized page, nor to generate multiple requests for the content components as parallel worker threads spawned from a main execution thread, thereby permitting concurrent generation of the content components at the component servers, whereby the retrieving by parallel worker threads greatly reduces delays feared by Nazem et al. as intolerable in a serial processing environment, then Applicants' claim 1 is allowable.

II. **CLAIMS 3, 13-14, 18, 28-30, 33, 44-45, 48, AND 58-60 ARE REJECTED UNDER 35 USC 103(A) AS BEING UNPATENTABLE OVER AAPA IN VIEW OF LOWERY, IN FURTHER VIEW OF NAZEM ET AL., IN FURTHER VIEW OF GREENWOOD. APPLICANTS RESPECTFULLY TRAVERSE THIS REJECTION.**

First, Claim 3 is allowable as being dependent from claim 1, i.e., for the same reasons set forth above with regard to the Nazem et al. referernce.

Second, Claim 3 is allowable for the following additional reason. Applicants' claim 3 recites "instantiating a timer ... and if no response is received from the first or second component server prior to a timeout period of the timer, ... establishing the response

from that component as a null value and carrying out the ... transmitting the personalized web page ... without waiting for the response." Greenwood does not teach or suggest this feature. Moreover, because Greenwood is drawn to a nonanalogous field of processing to Applicants' invention, it would not have been obvious to combine Greenwood with the other references including Nazem et al.

Greenwood relates to a browsing process, and not a process for assembling a personalized page. During the browsing process of Greenwood, a download request may be initiated. The Greenwood method allows continued browsing while the download occurs and is monitored in the background. As illustrated at Figures 3A, 3B and 3D of Greenwood, if a download is determined to be temporarily delayed, then the request will be repeated, or new requests sent, until a maximum number of requests have been sent at 342 and 380 of Figures 3B and 3D, respectively, at which time the process is ended respectively at 344 and 382. Thus, Greenwood stops sending requests when a maximum number of request have been sent, and not after a specified timeout period, as set forth at Applicants' claim 3. Moreover, Greenwood simply does not teach transmission of a personalized web page without waiting for a response from one of the component servers after a timeout period, as set forth at Applicants' claim 3. With the latter point, Greenwood simply stops requested the download. Notwithstanding these distinctions between Applicants' invention and Greenwood, there is a fundamental difference between downloading a URL by clicking a link within a browser window in accordance with Greenwood, and receiving a personalized web page with multiple content components retrieved from multiple component servers in accordance with Applicants' invention.

III. Claims 4-12, 19-27, 34-42, and 49-57 are rejected under 35 USC 103(a) as being unpatentable over AAPA in view of Lowery, in view Nazem et al. and in further view of Greenwood, and in further view of Anuff. Applicants respectfully traverse this rejection, and submit that each of claims 4-12, 19-27, 34-42, and

49-57 are allowable for the same reasons as previously described with respect to Nazem et al. and Greenwood.

The Commissioner is authorized to charge any deficiencies in fees and credit any overpayment of fees to Deposit Account No. 50-2019. A duplicate page is enclosed.

Respectfully submitted,

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